

REMARKS

Claims 1-6, 8, 10-16, 18-26, 37-47, and 63-112 are pending. Claims 1-84 have been canceled. Claims 85-112 have been added. No new matter is believed to be added by these amendments. Claims 85, 94, and 103 are independent claims. Claims 86-93, 95-102, and 104-112 depend from claims 85, 94, and 103, respectively.

In the Office Action, claims 5, 8, 16, 18-19, 26, 64 and 81 were objected to for informalities. Claims 64 and 66-84 were rejected under 35 USC §112, second paragraph for failing to set for the subject matter regarded as the invention. Claims 1, 3, and 63 were rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Pat. App. Pub. No. 2003/0036857 (hereinafter, "*Yao*"). Claims 44-47, 65-66, and 68 were rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Pat. No. 7,231,390 (hereinafter, "*Blair*"). Claims 2 and 4 were rejected under 35 USC §103(a) as being unpatentable over *Yao* in view of U.S. Pat. No. 6,023,659 (hereinafter, "*Seilhamer*"). Claims 5-6, 14-16, 18-19, 23-26, 37-39, and 42-43 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of U.S. Pat. No. 5,471,622 (hereinafter, "*Eadline*") in further view of *Yao*. Claims 8 and 20-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Eadline* further in view of *Yao* and further in view of U.S. Pat. App. Pub. No. 2003/0125315 (hereinafter, "*Mjalli*"). Claims 10-13 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Eadline* further in view of *Yao* and further in view of U.S. Pat. No. 6,343,275 (hereinafter, "*Wong*"). Claims 40-41 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Eadline* further in view of *Yao* and further in view of U.S. Pat. No. 5,852,715 (hereinafter, "*Raz*"). Claim 64 was rejected under 35 U.S.C. §103(a) as being unpatentable over

Yao in view of U.S. Pat. App. Pub. No. 2001/0049676 (hereinafter, "*Keppler*"). Claims 67 and 72-73 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Raz*. Claims 69-71 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Eadline*. Claims 74 and 82 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of U.S. Pat. App. Pub. No. 2003/0217078 (hereinafter, "*Carlson*"). Claim 76 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of U.S. Pat. No. 6,351,753 (hereinafter, "*Jagadish*"). Claims 77-80 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Jagadish* in further view of *Raz*. Claim 81 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Jagadish* in further view of *Raz* and further in view of "GridFTP Universal Data Transfer for the Grid" (hereinafter, "*Globus*"). Claims 83-84 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Blair* in view of *Carlson* and further in view of U.S. Pat. App. Pub. No. 2003/0133556 (hereinafter, "*Naik*").

Applicants respectfully requests allowance of claims 85-112 in view of the subsequent remarks regarding independent claims 85, 94, and 103.

I. Claim Amendments

Claims 85-112 have been added. Support for these claims can be found in U.S. Pat. App. Pub. No. 2007/0027630 (hereinafter, "the application"). More particularly, support for these claims can be found at least in Figures 2, 6, 7, 16, 17, and 18. Support for these claims can also be found in the detailed description of the application in paragraphs 11, 12, 40-46, 62, 69-70, 83-84, 143, 144, 205. No new matter is added by these amendments.

II. Abstract

Applicants have attached a new abstract on a separate sheet.

III. Claim Objections

Claims 5, 8, 16, 18-19, 26, 64, and 81 were objected to for informalities. As claims 5, 8, 16, 18-19, 26, 64, and 81 are canceled, Applicants respectfully request withdrawal of the objection.

IV. Rejections Under 35 U.S.C. §112, second paragraph

Claims 64 and 66-84 were rejected under 35 U.S.C. §112, second paragraph for failing to set forth subject matter regarded as the invention. As claims 64 and 66-84 are canceled, Applicants respectfully request withdrawal of the rejection.

V. Rejections Under 35 U.S.C. §102(e)

A proper rejection of a claim under 35 U.S.C. § 102 requires that a single prior art reference disclose each element of the claim. *See, e.g., W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983). The test is the same for a process. Anticipation requires identity between the claimed process and a process of the prior art. The claimed process, including each step thereof, must have been described or embodied, either expressly or inherently, in a single reference. *See, e.g., Glaverbel S.A. v. Northlake Mkt'g & Supp., Inc.*, 45 F.3d 1550, 33 USPQ2d 1496 (Fed. Cir. 1995). Those elements must either be inherent or disclosed expressly. *See, e.g., Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 7 USPQ2d 1057 (Fed. Cir. 1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). For anticipation, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. *See, e.g., Scripps Clinic & Res. Found. v. Genentech, Inc.*, 927 F.2d 1565,

18 USPQ2d 1001 (Fed. Cir. 1991). In summary, the single prior art reference must properly disclose, teach or suggest each element of the claimed invention. Moreover, “every element of the claimed invention must be literally present, arranged as in the claim. ... The identical invention must be shown in as complete detail as is contained in the patent claim.” *See, e.g., Richardson v. Suzuki Motor Company Co.* 868 F.2d 1226, 1236 (Fed. Cir. 1989).

Claims 1, 3, and 63 were rejected under 35 U.S.C. §102(e) as being unpatentable over *Yao*. Claims 44-47, 65-66, and 68 were rejected under 35 U.S.C. §102(e) as being unpatentable *Blair*. As all these claims are now canceled, Applicants request withdrawal of this rejection and allowance of claims 85-112.

Neither *Yao* nor *Blair* anticipate new independent claims 85, 94, or 103. *Yao* and *Blair* each fail to teach periodically querying a plurality of databases with biological sequences, assembly of a biological database comprised of the various types of data (both sequence and non-sequence related data), and periodically repeating the process to ensure the most up to date data is in the biological database. The ultimate goal being the presentation to a user of an executive summary that provides as much relevant information as possible from a wide variety of sources to a user, not merely sequence matches. *Yao* and *Blair* also fail to teach a system comprising a target database node, a query node, a functional node, and a network switch node configured to perform the methods disclosed. Applicants earnestly request reconsideration, withdrawal of this rejection, and allowance of claims 85-112.

VI. Rejections Under 35 U.S.C. §103(a)

For a *prima facie* case of obviousness, the cited prior art references, when combined, “must teach or suggest all the claim limitations” MPEP § 2143. Thus, if the references do not

teach each of the claimed limitations, a finding of obviousness fails. In addition, the Patent Office has the burden under § 103 to establish a *prima facie* case of obviousness, which can be satisfied only by showing some objective teaching in the prior art would lead one to combine the relevant teachings of the references. *See In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988). As such, an Applicant, to overcome an allegation of obviousness can show that the cited prior art references (when combined) do not teach or suggest all the claim limitations or that there is not an objective teaching in the prior art that would lead one to combine the relevant teachings of the references.

The Supreme Court has reaffirmed the *Graham* factors for determination of obvious under 35 U.S.C. 103(a). *KSR Int'l Co. v. Teleflex, Inc. (KSR)*, No 04-1350 (U.S. Apr. 30, 2007). The four factual inquiries under *Graham* require examination of: (1) the scope and contents of the prior art; (2) the differences between the prior art and the claims in issue; (3) the level of ordinary skill in the pertinent art; and (4) the objective evidence of secondary consideration. *Graham v. John Deere (Graham)*, 383 U.S. 1, 17-18, 149 USPQ 459, 467 (1966); see also 35 U.S.C. § 103 (2000). The Court has further recognized that the requirement for a teaching, suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, which was established by the Court of Customs and Patent Appeals, provides a helpful insight for determining whether the claimed subject matter is obvious under 35 U.S.C. § 103(a). In addition, the Court maintained that any analysis supporting a rejection under 35 U.S.C. § 103(a) should be made explicit, and that it is “important to identify reasons that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements” in the manner claimed, because “inventions in most, if not all, instances rely upon building blocks

long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *KSR* at 14, 15.

Where an invention is contended to be obvious based upon a combination of elements across different references, one should be able to identify particular reasons that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements. *See, KSR Int’l Co.*, at 14, 15. This requirement prevents the use of “the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability—the essence of hindsight.” *Ecolochem, Inc. v. So. Cal. Edison Co.*, 227 F.3d 1361, 1371-72 (Fed. Cir. 2000) (quoting *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999)).

Claims 2, 4-26, 37-43, 64, 67, and 69-84 were rejected under 35 U.S.C. §103(a) as being unpatentable over various combinations of *Yao, Blair, Seilhamer, Eadline, Mjalli, Wong, Raz, Keppler, Carlson, Jagadish, Globus*, and/or *Naik*. As all these claims are now canceled, Applicants request withdrawal of this rejection and allowance of claims 85-112.

No combination of *Yao, Blair, Seilhamer, Eadline, Mjalli, Wong, Raz, Keppler, Carlson, Jagadish, Globus*, and/or *Naik* renders obvious new independent claims 85, 94, or 103. No combination of the cited references teach periodically querying a plurality of databases with biological sequences, assembly of a biological database comprised of the various types of data (both sequence and non-sequence related data), and periodically repeating the process to ensure the most up to date data is in the biological database. The ultimate goal being the presentation to a user of an executive summary that provides as much relevant information as possible to a user from a wide variety of sources, not merely sequence matches. The cited references also fail to teach a system comprising a target database node, a query node, a functional node, and a network

switch node configured to perform the methods disclosed. Applicants earnestly request reconsideration, withdrawal of this rejection, and allowance of claims 85-112.

Applicants respectfully put forth that there is no motivation to combine the cited references cited in the manner described in the Office Action to arrive at the new claims. Applicants submit that the current construction of the cited references in the manner provided in the Office Action requires hindsight reasoning, which the Federal Circuit has explicitly rejected. *See In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992). It would not have been obvious to one of ordinary skill in the art to combine the cited references, and the subject matter of the limitations not taught by any of the cited references, to arrive at the presently claimed invention. Applicants earnestly request reconsideration, withdrawal of this rejection, and allowance of claims 85-112.

VII. Conclusion

The teachings of *Yao, Blair, Seilhamer, Eadline, Mjalli, Wong, Raz, Keppler, Carlson, Jagadish, Globus, and/or Naik*, alone, or in any combination do not anticipate or render obvious any of the pending claims. As the Court noted in *In re Fine*, “dependent claims are nonobvious under section 103 if the independent claims from which they depend are nonobvious.” 5 U.S.P.Q.2d 1569, 1600 (Fed. Cir. 1988). Since the Applicants respectfully assert that all the pending independent claims are allowable, all the pending dependent claims are also allowable. Thus, Applicants respectfully request allowance of all pending claims in view of the previous remarks and amendments. The Examiner is invited and encouraged to contact directly the undersigned if such contact may enhance the efficient prosecution of this application to issue.

A fee of \$555.00 for a three-month extension of time filing fee for a small entity is enclosed. The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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